Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application. The following listing provides the amended claims with the amendments marked with deleted material crossed out and new material underlined to show the changes made.

Listing of Claims:

Claims 1-26. Canceled.

27. (Previously Presented) For an electronic design automation application that partitions a region of a design layout into a plurality of sub-regions, wherein a plurality of edges exist between said sub-regions, a method of pre-computing attributes of routes for nets in the region, the method comprising:

a) for a first set of sub-regions, wherein each sub-region of the first set includes only one ~~a~~ contact point, identifying a first set of potential routes, wherein each route in the first set of potential routes traverses the first set of sub-regions through the contact point of each sub-region of the first set; wherein the contact points are located at the same location in each sub-region and each of a plurality of sets of potential routes has at least two routes;

b) for each particular edge, identifying an edge-intersect cost that is dependent on the number of routes in the first set of potential routes that intersect the particular edge; and

c) storing the identified edge-intersect costs for the first set of sub-regions.

28. (Previously Presented) The method of claim 27, wherein the edge-intersect cost of a particular edge equals the number of potential routes that intersect the particular edge.

29. (Currently Amended) ~~The method of claim 27,~~ For an electronic design automation application that partitions a region of a design layout into a plurality of sub-regions,

wherein a plurality of edges exist between said sub-regions, a method of pre-computing attributes of routes for nets in the region, the method comprising:

a) for a first set of sub-regions, wherein each sub-region of the first set includes a contact point, identifying a first set of potential routes, wherein each route in the first set of potential routes traverses the first set of sub-regions through the contact point of each sub-region of the first set;

b) for each particular edge, identifying an edge-intersect cost that is dependent on the number of routes in the first set of potential routes that intersect the particular edge; and

c) storing the identified edge-intersect costs for the first set of sub-regions;

wherein identifying the edge-intersect cost for each particular edge comprises identifying an edge-intersect probability for each particular edge, wherein the edge-intersect probability for each particular edge equals the number of potential routes of the first set of potential routes that intersect the particular edge divided by the number of potential routes in the first set of potential routes.

30. (Previously Presented) The method of claim 29, wherein the cost for each particular edge equals the edge-intersect probability for the particular edge.

31. (Previously Presented) The method of claim 29, wherein identifying the cost for each particular edge further comprises deriving the cost for each particular edge from the edge-intersect probability of the particular edge.

32. (Previously Presented) The method of claim 27 further comprising:

a) for a second set of sub-regions, identifying a second set of potential routes, wherein each route in the second set of potential routes traverses the second set of sub-regions;

b) for each particular edge, identifying an edge-intersect cost that is dependent on the number of routes in the second set of potential routes that intersect the particular edge; and

c) storing the identified edge-intersect costs for the second set of sub-regions.

33. (Previously Presented) For an electronic design automation application that partitions a region of a design layout into a plurality of sub-regions, wherein a plurality of paths exist between said sub-regions, a method of pre-computing attributes of routes for nets in the region, the method comprising:

a) for a first set of sub-regions, wherein each sub-region of the first set includes only one ~~a~~ contact point, identifying a first set of potential routes that traverse the first set of sub-regions through the contact point of each sub-region of the first set; wherein the contact points are located at the same location in each sub-region and each of a plurality of sets of potential routes has at least two routes;

b) for each particular path, identifying a path-use cost that is dependent on the number of routes in the first set of potential routes that use the particular path; and

c) storing the identified path-use costs for the first set of sub-regions.

34. (Original) The method of claim 33, wherein the path-use cost of a particular path equals the number of potential routes that use the particular path.

35. (Currently Amended) ~~The method of claim 33,~~ For an electronic design automation application that partitions a region of a design layout into a plurality of sub-regions, wherein a plurality of paths exist between said sub-regions, a method of pre-computing attributes of routes for nets in the region, the method comprising:

includes a contact point, identifying a first set of potential routes that traverse the first set of sub-regions through the contact point of each sub-region of the first set;

b) for each particular path, identifying a path-use cost that is dependent on the number of routes in the first set of potential routes that use the particular path; and

c) storing the identified path-use costs for the first set of sub-regions;

wherein identifying the path-use cost for each particular path comprises identifying an path-use probability for each particular path, wherein the path-use probability for each particular path equals the number of potential routes of the first set of potential routes that use the particular path divided by the number of potential routes in the first set of potential routes.

36. (Previously Presented) The method of claim 35, wherein the cost for each particular path equals the path-use probability for the particular path.

37. (Previously Presented) The method of claim 35, wherein identifying the cost for each particular path further comprises deriving the cost for each particular path from the path-use probability of the particular path.

38. (Previously Presented) The method of claim 33 further comprising:

a) for a second set of sub-regions, identifying a second set of potential routes that traverse the second set of sub-regions;

b) for each particular path, identifying a path-use cost that is dependent on the number of routes in the second set of potential routes that use the particular path; and

c) storing the identified path-use costs for the second set of sub-regions.

39. (Cancel)

a) for a first set of sub-regions, wherein each sub-region of the first set includes a contact point, identifying a first set of potential routes that traverse the first set of sub-regions through the contact point of each sub-region of the first set;

b) for each particular path, identifying a path-use cost that is dependent on the number of routes in the first set of potential routes that use the particular path; and

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